Communications
Emergency Support Function #2
State Emergency Operations Plan

LEAD AGENCY: Division of Information Technologies (DOIT), Department of Personnel and Administration.

SUPPORT AGENCIES: Military and Veteran Affairs, Public Health and Environment, Public Safety, Division of Emergency Management, Amateur Radio Emergency Services (ARES), Radio Amateur Civil Emergency Services (RACES), Professional Associations, and the Private Sector

I   **PURPOSE**

The purpose of this annex is twofold: first, to provide emergency telecommunications and telecommunications support for use in disaster or emergency situations; and second, to provide for the receipt and dissemination of emergency notifications include, but are not limited to Homeland Security Alert Levels, enemy attack, natural and technological disasters, hazardous materials incidents, nuclear fallout and any other large scale emergencies or alerts affecting the state and local governments of Colorado, and hence, the populace and private organizations in potentially affected areas in keeping with all existing references, laws, and guidelines.

II   **SCOPE**

The scope of this annex is to describe the overall communications and warning systems employed by the Colorado State Emergency Operations Center (SEOC) prior to, during and after a disaster or emergency situation. These systems will be used in support of the operations of the SEOC, local governments, and the response community and include, but are not limited to radio communications, land line, cellular, secure, and special telephonic communications, computer internet and modem communications and the Emergency Alert System (EAS) coordinating all broadcast and cable mediums. Each of these systems will be described later in greater detail.

III   **SITUATION**

Communications and warning systems are an integral part in the successful completion of any emergency or disaster type situation.   This communication and warning annex is developed as an integral part of the Colorado State Emergency Operations Plan (SEOP), but it is also designed to be a stand-alone plan with which other state agencies and local government jurisdictions may base their communications and warning plans upon.   This annex describes the systems which will be used for communications, and for alerting public officials and the general public to impending emergencies or disaster situations that require prompt action to save lives, prevent injuries, and safeguard property. This annex is issued for the guidance of all levels of government within the State

of Colorado and is applicable statewide. It is the policy of the state that all available resources for emergencies are ready for immediate use at any time, therefore, this annex provides for the routine use of state telecommunications and warning resources to augment local resources for any multi-agency response as a means of testing and exercising such equipment and systems.

IV   **PLANNING ASSUMPTIONS**

It is assumed that all incidents, to include training exercises and exercise support have the potential for escalation into an emergency or disaster situation that will requiring support of the SEOC and all of its inherent communications and warning systems until determined differently.

V   **CONCEPT OF OPERATIONS**

As defined, communications will be a separate and distinct system from warning. Each of these systems will be defined and detailed separately.

VI   **COMMUNICATIONS**

    A.   General

        1.   A prime requirement of all organizations engaged in disaster and emergency operations is effective comprehensive telecommunications with all of the involved and potentially involved elements. The magnitude of a particular situation determines the extent of the emergency response and the need for communications. The degree to which and the type of telecommunications systems are utilized is directly related to the scope of the incident.

        2.   In a disaster or emergency, all available telecommunications will be used to the extent necessary to achieve a coordinated response. A description of each the systems available to support emergency operations is contained in an appendix to this annex.

        3.   Voice communication is necessary to the command and control of response and support forces. However, the more information such as damage reports and resource lists can be transmitted by other means such as facsimiles and computer interface, the more the impact is reduced on telecommunications increasing the amount of information available to decision makers.

        4.   The linkages required in a disaster emergency can be grouped as follows:

            a.   Warning and Notification Systems

(1)   Inter- and Intra-jurisdictional communications at all levels

(2)   Communications to subordinate, adjacent and superior jurisdictions

(3)   It is recognized that some telecommunications elements of the emergency or disaster response organization will of necessity be established before the activation of any plans.   Recognizing the emergent nature of the telecommunications system, no pre-ordained or pre-set formal structure is desirable. However, the following NIMS guidelines will be used:

    (a)   The incident communications officer will be designated by the incident commander as soon as practical, if not pre-designated.

    (b)   Multiple, independent link systems (such as landline, cellular, and satellite telephones) should be used whenever possible in preference to common link systems such as radio communications.

    (c)   Hard copy telecommunications (such as facsimile and computer generated) will be used whenever possible for emergency nature operational traffic.

    (d)   The Incident Communications Officer will establish net discipline on all nets and frequencies being used as soon as possible.

    (e)   The Incident Communications Officer may move activities between available circuits / nets in order to maximize efficiency. In making such decisions, the Communications Officer should take into account availability of resources, difficulties of transition, and potential administrative alternatives.

(4)   A fully equipped mobile communications trailer, three (3) portable VHF/UHF packages and one (1) HF portable packages designed for the replacement of base station or communications centers and or use at forward command posts or locations in the field are available through the Division of Emergency Management (DEM) and the Colorado State Patrol.

An additional communications trailer is available from the Department of Corrections (DOC).

(5)   Should landline or cellular telephonic communications become overtaxed with system overload, access to the Federal Government Emergency Telephone System (GETS) is also available through the DEM and cellular priority access system (WPS) when available from cellular vendors.

B.   WARNING

1.   General

a.   In order to pass warning promptly, a fan-out system is utilized. At the state level, this fan-out system is based primarily upon three (3) separate elements: one, the National Warning System (NAWAS); two, the Colorado Crime Information Center (CCIC) System; and three, the Emergency Alert System (EAS). These three elements are the backbone of the Colorado warning system. Other resources will be utilized as required including email.

b.   The Colorado warning structure consists of warning points at the federal, state, county, and municipal level, as well as specialized facility warning points. These points compose the Colorado elements of the National Warning System for subordinate and adjacent jurisdictions as well as notification.

c.   Warnings to the county, area, state, regional and national warning points may originate at any point having knowledge of an imminent threat to life or property and access to the system. The original source of these warnings may be spotter networks, law enforcement, fire, or state agencies or federal agencies such as the National Weather Service.

d.   All available communications will be used to verify and disseminate warnings.   Specific operational warning procedures are detailed in the operational appendices.

e.   Redundant warning messages via NAWAS, CCIC, and EAS are intended as a means of assuring warning delivery.

f.   Many types of incidents may occur requiring warning actions, may include, but are not limited to hazardous materials incidents, severe weather, attack warnings, civil disturbances. The origination of these warnings may be any source. Because of their closed and secure nature, traffic

via NAWAS and CCIC may be assumed to be valid. Other reports and warnings should be validated if time and situation allow.

VII   **ORGANIZATION AND RESPONSIBILITIES**

    A.   **COMMUNICATIONS**

        1.   Organization

            a.   Federal Emergency Management Agency (FEMA) - FEMA is the designated federal lead agency for federal emergency management and disaster assistance for information and planning (ESF 5). FEMA operates the Federal National Alert Radio (FNARS) which is available for state use. Additionally, FEMA Region VIII has a number of portable radios and the Mobile Emergency Response System (MERS) which may be used to augment state communication resources.

            b.   Federal Communications Commission (FCC) - The FCC has only limited telecommunications resources, but may be utilized to declare communications emergencies limiting use of telecommunications in certain areas. The contact point for Special Temporary Authorization (SEA) which will allow the state and local governments to operate for the duration of an emergency or disaster in ways normally precluded by FCC regulations. Technical assistance is also available.

            c.   Department of Defense (DOD) - DOD is the single largest user of telecommunications within the federal government. DOD installations throughout Colorado have a plethora of telecommunications assets and personnel not pre-empted by, that may be utilized for local emergencies when a national defense emergency. DOD also is the proponent agency for the DSN network that allows access to DOD facilities nationwide.

            d.   National Aeronautic and Space Administration (NASA) - NASA has a wide range of satellite telecommunications systems which can function in any disaster area regardless of the geographical constraints.

            e.   General Services Administration (GSA) - GSA is the designated manager of most federal civilian telecommunications resources.   The GSA administers the Federal Telephone System (FTS) as well as data and radio systems.

f. The National Weather Service (NWS) - The NWS has two statewide data allow written one-way traffic. One is restricted to NWS facilities only; however, with access to CCIC and to NAWAS, the NWS can be used for redundancies in communications.

g. United States Forest Service (USFS) - The USFS has a large network of repeater bases and mobiles many of which are currently networked with the State Forest Service, sheriffs departments and Colorado State Patrol Dispatch Centers throughout the state.

h. Department of Interior (DOI) - DOI has two (2) agencies that together have a system similar to the USFS the Bureau of Land Management and the Bureau of Indian Affairs. The National Park Service has extensive telecommunications facilities within the limited boundaries of its own jurisdiction. Additionally, the Bureau of Reclamation has limited telecommunications resources.

i. Department of Justice (DOJ) - DOJ relies primarily on the radio systems of the Federal Bureau of Investigation (FBI) and the Drug Enforcement Agency (DEA) composed of repeaters and mobiles in certain areas of the State. Because of the restricted nature of these DOJ systems, they are not considered a viable resource for other than national security emergencies.

j. Colorado Department of Public Safety (DPS)

Colorado State Patrol (CSP) - CSP has an extensive network of bases, mobiles, and communication centers. The CSP has dispatch personnel to interface with many sheriff's offices, police departments, fire departments, and emergency medical service agencies, particularly in rural areas of the state, utilizing the Colorado Digital Trunked Radio System (DTR). Other State, county, and local agencies also use the DTR system for public safety communications.

k. Colorado Department of Local Affairs (DOLA)

Division of Emergency Management (DEM) - DEM's low band radio net currently covers the Front Range and several South and Southeast areas of the State. DEM has access to a local government frequency and mobile communications van and has several portable packages and a protected comprehensive coverage backup communications center. This EOC includes internal and external 800 MHz., VHF,

UHF, HF, and standard low band bases and mobiles. DEM is also connected to the State microwave system as well as the DOD DSN system, and with the cooperation of FEMA can have access to the FTS.

l.   Colorado Department of Military and Veteran Affairs (DMVA)

(a)   Air National Guard (ANG) - The ANG has a metro Denver area VHF repeater system and a large number of HF and low band airmobiles. Additionally, ANG has a mobile communications van and can offer service facilities and technicians.

(b)   Army National Guard (ARNG) - The ARNG has HF facilities at each armory, as well as mobile HF and low band units. The ARNG also has service facilities, communications and signal units, and technicians.

(c)   Civil Air Patrol (CAP) - the CAP has an extensive network of volunteer run VHF repeaters, base stations, HF and VHF mobiles and airmobiles located throughout the state, and a large cadre of qualified amateur radio operators. DEM has a station on the CAP network.

m.   Colorado Department of Personnel and Administration.

The Division of Information Technologies provides all telecommunications engineering and service facilities and staffing for the State with the exception the Colorado National Guard facilities. They maintain radio systems, frequency management duties and maintenance of all assets such as the state repeater and microwave system.

n.   Colorado Department of Natural Resources (DNR)

DNR utilizes the State DTR system for Division of Wildlife (DOW) and Parks and Recreation. A large number of mobiles from DOW are available in all areas of the State.

o.   Others

Each State correctional, medical and higher education institution is moving to utilize the state DTR system with mobiles and limited coverage of the area in which they are located.

p.   County and Local Governments

Most county and local governments have at least one radio system which includes dispatchers, remote base and repeaters and mobiles. A large number of these networks with the CSP, particularly in the rural areas. An increasing number of local governments are also starting the switch to the DTR system.

2. Responsibilities

   a. Federal Agencies - as specified in Federal Plans and Federal / state agreements

   b. State Agencies

      (1) All agencies - Provide agency telecommunications resources as directed by the state coordinating officer in all emergency and disaster incidents.

      (2) Department of Local Affairs (DOLA) - Coordinate and manage telecommunications resources in support of State and local jurisdictions operations.

      (3) Radio Amateur Civil Emergency Services (RACES) and Amateur Radio Emergency Services (ARES) - Supply manpower, equipment and technical services to the SEOC in support of this plan. These groups operate under DEM.

3. WARNING

   a. Organization

      (1) The Federal Emergency Management Agency (FEMA) is the lead and primary Federal agency in emergency management and warning activities and actions.

      (2) National Weather Service (NWS) is the lead and primary Federal agency involved in weather warning and direct public warning activities.

      (3) State of Colorado Department of Public Safety (CSP) provides primary staffing for State and some area warning points located in their dispatch centers.

      (4) DEM is the lead and primary State agency for emergency management and warning activities and actions.

(5)   County and Municipal Government

(a)   The local emergency management agency is the lead and primary local agency involved in emergency management and warning activities.

(b)   The local warning points (as designated by the Colorado Warning Point SOP) provides primary staffing for local warning points.

b.   Responsibilities

(1)   Overall responsibilities for warning procedures are detailed later in this annex.

(2)   The Federal Emergency Management Agency (FEMA) under applicable regulations and statutes:

(a)   Manages and is the primary point of contact for the National Warning System (NAWAS)

(b)   Is primarily responsible for alerting state government for any significant national security incident or event.

(c)   Coordinates weather warnings on NAWAS with the NWS

(d)   Is responsible for the relay of communications traffic from national to regional to state levels and reverse.

(e)   Is the recipient of information regarding any local emergency that may have a national impact or be declared a national disaster?

(3)   National Weather Service (NWS) under federal regulations:

(a)   Determines and forecasts the nature of weather incidents.

(b)   Disseminates advisories over the NAWAS, the National Oceanic and Atmospheric Administration (NOA) National Weather Wire Service (NWWS) and the National Weather Radio (NWR). The Denver NWS Office will also employ the use of the Colorado Crime

Information Computer (CCIC) system for advisories.

    (c)   Disseminates nation security warnings over NWR.

  (4)   Division Emergency Management (DEM)

    (a)   Establishes, disseminates, maintains, and updates the State Warning Plan and SOP.

    (b)   Assists local agencies with warning planning as necessary

    (c)   Serves as an Alternate State Warning Point in the event of unavailability of a State Warning Point listed below.

    (d)   In conjunction with the State Emergency Communications Committee (SECC) coordinates all Emergency Alert System (EAS) activities and responsibilities.

  (5)   Colorado State Patrol (CSP)

    (a)   Provides 24-hour coverage of the State Warning Point (Denver), and maintains contact with the following warning points via NAWAS:

Adams County Fire
Aspen Combined Communications
Boulder County Communications
Chaffee County Sheriff
Colorado Springs Fire
CSP Alamosa
CSP Craig
CSP Montrose
CSP Pueblo
Denver (Boulder) NWS *
Denver Fire
Douglas County Sheriff
El Paso County COEM
Executive Security Unit Command Center
Fort Carson Duty Officer
Goodland Kansas NWS
Grand Junction DOE
Grand Junction NWS *
Greeley/Weld County Communications
Jefferson County Sheriff

La Junta DPS (Police)
La Plata County Sheriff
Larimer County Sheriff
Lincoln County Sheriff
Littleton Police
Morgan County Communications Center
Prowers County 911
Pueblo NWS *
State EOC *
Sterling Police

* Have NAWAS terminals but are not designated warning points

    (b)   Disseminates warning to areas of concern (Potential hazard areas) by DEM as an alternate to CSP.

    (c)   Keeps DEM (SEOC) advised of significant events within the state.

    (d)   Receives and routes warnings from local and area warning points to other threatened areas.

    (e)   Provides Area Warning Point staffing as appropriate.

    (f)   Area Warning Points (which may be a State, County or Local Point)

    (g)   Provides 24-hour contact for appropriate area. Advise State Warning Point of any significant events within area of responsibility and of changes in area warning system.

    (h)   Develops, implements, maintains, and updates a system for passing warnings and other traffic as required to warning points within operational area and provide DEM a copy of such plans or systems.

    (i)   Training area warning point staff as to warning point system operation and responsibilities.

    (6)   Area Warning Points

JURISDICTION/AGENCY	NOTIFICATION RESPONSIBILITY
Colorado State Patrol (CSP) Denver (Primary)	Entire system and Clear Creek and Gilpin

Colorado EOC Golden (Alternate)	Entire system
Adams County Fire	Adams County
Alamosa CSP	Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache
Boulder Police	Boulder County
Colorado Springs Fire	El Paso and Teller
Chaffee County Sheriff	Chaffee, Gunnison, Hinsdale and Park Counties
Craig CSP	Grand, Jackson, Summit, Eagle, Pitkin, Moffat, Rio Blanco, Routt, and portions of Garfield Counties
Denver Fire	Denver City and County
Douglas County Sheriff	Douglas County
La Plata Sheriff	Archuleta, Dolores, La Plata, Montezuma and San Juan Counties
Aspen	Eagle, Garfield, Lake, Pitkin and Summit Counties
El Paso County EOC	El Paso County
Ft Carson Duty Officer	None
Executive Security Unit	
Command Center	None
Greeley/Weld County Commo	Weld County
Grand Junction DOE	None
Goodland, KA weather	None
Jefferson County Commo	Jefferson County
La Junta DPS	La Junta
Larimer County Sheriff	Larimer
Prowers 911	Baca, Bent, Kiowa, Otero and Prowers Counties
Lincoln County Sheriff	Cheyenne, Elbert, Lincoln and Kit Carson Counties
Littleton Police	Arapahoe County
Montrose CSP	Montrose, Delta, Mesa, Gunnison, Hinsdale, Ouray, San Miguel, Dolores, San Juan, Montezuma, La Plate, Archuleta and portions of Mineral Counties.
Morgan County Commo	Morgan County
Pueblo CSP	Lake, Park, Chaffee, Teller, El Paso, Kiowa, Cheyenne, Otero, Bent, Prowers, Baca, Crowley, Custer, Fremont, Huerfano, Las Animas, and Pueblo Counties.
Sterling PD	Logan, Phillips, Sedgwick, Washington and Yuma Counties

Disseminate warning to and accept notification from assigned counties via radio, telephone, E-Mail, facsimile or any other means appropriate.

(7)   Counties

(a)   Provide a 24 hour contact for the county either by the county warning point or by arrangement with another warning point. Advise of any

significant event(s) within the county and of changes in the local system used.

    (b)   Develop, implement, maintain and update a system for warning the general public. Publish a municipal warning plan and provide a copy and updates to DEM and the appropriate area or county warning point.

    (c)   Educate the public regarding the system(s) of warning, warning signals and procedures.

    (d)   Train county staff as to warning system responsibilities and operations.

(8)   Municipalities

    (a)   Provide 24-hour contact list for municipality, either by Municipality Warning Point, or by an on-call list of municipality staff. Advise County and State Warning Point of any significant event(s) within the municipality or any changes in the local warning system.

    (b)   Develop, implement, maintain and update system for warning the general public. Publish a municipal warning plan and provide a copy and updates to DEM and appropriate area or county warning point.

    (c)   Educate the public regarding the system of warning, warning signals and applicable procedures.

    (d)   Train city staff on warning system responsibilities and operations.

    (e)   Warning Point Area Assignments

    (f)   Warning points are assigned county responsibilities as shown above.

4.   System Descriptions

    a.   ARES/RACES - Two groups of amateur radio operators (hams) support both the SEOC and local governments by the operations of amateur radio systems that include voice operations, Packet Radio, Slow Scan/Fast Scan TV, and radio maintenance as required.

b. DEM has several internal and external communications systems in addition to the amateur support listed above. First, DEM has access to the CSP statewide channel 3 (Described below) from the SEOC and all of its radio equipped vehicles. DEM also has the Local Government System which is a series of stations and repeaters on 45.24 MHz accessed both by the SEOC and its vehicles. Additionally, DEM has both internal and external 800 MHz capabilities with mobiles and a base station.

c. Colorado State Patrol (CSP) System - Through their dispatch centers and communications van, CSP supports the communications effort by the use of their statewide repeaters and channels, the DTR system, and their interface with the DEM Local Government system (45.24 MHz) and VHF radios.

d. Government Emergency Telephone System (GETS) - The State of Colorado has been granted access to the Federal government's GETS. This is a telephonic priority system. If telephone circuits are not available due to high usage, during an emergency, using GETS will allow priority access to lines and cell sites. The DEM Communications and Warning Officer have access cards required to use the system. This access can be used by state and local government representatives; however, all calls will be paid for upon conclusion of the event.

e. FEMA Systems - The Federal Emergency Management Agency supports communications in several ways. They provide an 800-telephone number for use by the SEOC and its representatives for nationwide long distance telephone calls. Secondly, through their MERS, they can provide additional telephone and cellular services as well as radio communications support. FEMA also provides the nationwide and statewide Nation Alert Warning System (NAWAS). These are dedicated national and statewide telephone systems that connect Federal and State warning points to include National Weather Service Offices.

f. Colorado National Guard - The CONG has several strategic and tactical systems which can be utilized in support of emergency operations. These systems are available at both fixed and mobile or field sites.

g. DEM also has limited access to the Colorado Crime Information Computer System (CCIC). This system is operated and maintained by the Colorado Bureau of

Investigation and allows for near immediate computer communications with several hundred public safety agencies throughout the state.

h.   DEM maintains a system of cellular telephones, satellite phones, DTR radios, and pagers for staff.